REMARKS

This communication is in response to the Office Action mailed June 28, 2004. In the Office Action, claims 1-20 were pending of which claims 1-20 were rejected.

With this amendment, claims 1, 6-7 and 10-20 have been amended and the remaining claims, namely 2-5 and 8-9 are unchanged. Applicant respectfully notes that all amendments have been made for reasons of clarity and not based on prior art. In particular, recitations to a data storage system associated with a storage medium, wherein the storage medium includes a plurality of tracks having a plurality of sectors, have been made to clarify the present invention.

The Office Action first reports that claims 1-2, 6-11 and 15-20 were rejected under 35 U.S.C. 102(b) as being anticipated by Satoh et al. (U.S. Pat. No. 5,469,418). Independent claim 1 is a method claim that recites that data is read from a number of sectors during a first operation of the storage system. Further, error sectors are identified as those sectors having a number of errors above a predetermined threshold. The data from the sectors that are identified as error sectors is corrected and written to the error sectors during a second operation of the storage system.

Satoh describes a method of writing data to an optical disc. Applicant respectfully notes that, at times, Satoh appears to interchange the terms "sector" and "track". For example, Satoh provides that "sector alternate processing is performed (Step S49) to write the data of the defective track again from the memory of 14A in a spare sector", (emphasis added, col. 6, ll. 20-22). As can best be gleaned, the Satoh reference teaches writing and reading data on a track by track basis (col. 4, ln. 40 - col. 5, ln. 21). One track is read or written in a revolution of the disc. During a write verify mode, in which one track is read each revolution, errors are tracked and it is

determined whether the number of errors is larger than a predetermined number. It is unclear what portion of the disk is used to determine what error rate (i.e. track or sector) is used to calculate if the predetermined number has been exceeded. However, Satoh does describe that defective tracks are rewritten to spare sectors of the disk (col. 6, ln. 14-22). Thus, applicant respectfully submits that Satoh makes no reference to identifying error sectors in a track or error sectors from a number of sectors as recited in claim 1. Furthermore, there is no reference to writing corrected data to the defective track or sector. In contrast, data is written elsewhere (i.e. a spare sector) and thus Satoh does not teach or suggest writing corrected data to the error sector. As a result, applicant respectfully submits that claim 1 is neither taught nor suggested by Satoh and is in allowable form.

On page 4, the Office Action rejects independent claim 10 under 102(b) as being anticipated by Satoh. Applicant notes that independent claim 10 recites a controller to identify error sectors having a number of errors above a predetermined threshold, correct the data from the errors sectors, and write the corrected data to the error sectors. Applicant respectfully submits that, for the reasons mentioned above, Satoh does not teach or suggest the identification of error sectors or writing corrected data back to the error sectors. Thus, applicant respectfully submits that claim 10 is in allowable form.

Further, the Office Action rejects independent claim 18 under 102(b) as being anticipated by Satoh. Independent claim 18 includes a data storage system comprising a channel and means for correcting sectors identified as having a number of errors above a predetermined threshold. The "means for correcting sectors" is a means plus function element, which must be examined under 35 U.S.C. 112, sixth paragraph. Under this statute, an element in a claim for a combination may be expressed for a means or step for

performing a specified function without the recital of structure, material or acts in support thereof, and such claims shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

In order to make a *prima facie* case of equivalence under 35 U.S.C. 112, sixth paragraph and MPEP 2183, the Examiner must show that a prior art element:

(a) performs the functions specified in the claims,

(b) is not excluded by any explicit definition provided in the specification for an equivalent, and

(c) is an equivalent of the means-(or step)-plus function limitation.

Further, unless an element performs the identical function specified in the claim, it cannot be an equivalent for the purposes of 35 U.S.C. 112, sixth paragraph. *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 4 USPQ2d 1737 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 961 (1988).

As discussed above, Satoh describes that data is read, and errors tracked, one track at a time. Further, Satoh describes that data of a defective track is corrected and written on a separate portion of the disc. Therefore, these elements of the prior art do not perform the function recited in independent claim 18. As such, these elements cannot be considered equivalents under 35 U.S.C 112, sixth paragraph. Thus, Satoh cannot be used for anticipation of claim 18 under 35 U.S.C. 102(b) and claim 18 is thus believed to be allowable.

Applicant submits that dependent claims 2, 6-9, 11, 15-17 and 19-20 recite further features that are neither taught nor suggested by Satoh. In particular, claim 2 is directed toward identifying error sectors by tracking a number of errors in each sector. Dependent claims 6 and 7 are directed to a method in which only the error sectors are read during an intermediate

operation, which is neither taught nor suggested by Satoh. Thus, these claims are believed to be separately patentable.

On page 6, the Office Action rejects claims 3-5 and 12-14 under 35 U.S.C. 103(a) as being unpatentable over Satoh. Applicant submits that dependent claims 3-5 and 12-14 depend on independent claims 1 and 10, respectively, and are in allowable form. In particular, Applicant submits that the generation of a mask indicative of whether each sector is an error sector or a non-error sector is neither taught nor suggested by Satoh. Applicant notes that Satoh, as mentioned above, reads and tracks errors on a track-by-track basis. As a result, the identification of a number of errors in a given sector, generation of a signal indicative of whether each sector is an error sector, and the generation of a mask based on these signals has no support or motivation in Satoh. In contrast, the present invention of claims 3 and 12 utilize a mask to track error sectors and allows for corrected data to be written to the error sectors. In order for a mask to be used as an indicator or error sectors, errors must be tracked on a sector-by-sector basis instead of a track-by-track basis.

In view of the foregoing, applicant respectfully requests that the rejection of claims 1-20 be withdrawn. Reconsideration and allowance of all pending claims is respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: _____

Todd R. Fronek, Reg. No. 48,516
Suite 1600 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312